

1 **COHO CONSIDERATIONS, 1999**

2  
3 **Proposed Rule Language**  
4 [from July 6, 1999]  
5  
6

7 **Amend 14 CCR § 895.1 Definitions**

8 [amend the following definition in appropriate alphabetical listing]  
9

10 "Plan" means:

11  
12 (a) Timber Harvesting Plan (THP) as described in PRC 4582.

13  
14 (b) Nonindustrial Timber Management Plan (NTMP) as described in PRC 4593.2(e).

15  
16 (c) Sustained Yield Plan (SYP) as described in 14 CCR 1091.1 and 1091.2.

17  
18 (d) Program Timber Harvesting Plan (PTHP) as described in 14 CCR 1092 and 1092.1.  
19  
20

21 Note: Authority cited: Sections 4551, 4551.5, 4553, 4561, 4561.5, 4561.6, 4562, 4562.5, 4562.7 and 4591.1, Public  
22 Resources Code. Reference: Sections 4512, 4513, 4526, 4551, 4561, 4561.6, 4562, 4562.5, 4562.7, 4583.2, 4591.1,  
23 21001(f), 21080.5, 21083.2 and 21084.1, Public Resources Code; CEQA Guidelines Appendix K (printed following  
24 Section 15387 of Title 14 Cal. Code of Regulations), and *Laupheimer v. State* (1988) 200 Cal.App.3d 440; 246  
25 Cal.Rptr. 82.  
26

27 **Amend 14 CCR § 897 Implementation of Act Intent**  
28

29 (a) RPFs who prepare plans shall consider the range of feasible silvicultural system, operating methods  
30 and procedures provided in these rules in seeking to avoid or substantially lessen significant adverse effects  
31 on the environment from timber harvesting. RPFs shall use these rules for guidance as to which are the  
32 most appropriate feasible silvicultural systems, operating methods and procedures which will carry out the  
33 intent of the Act.

34 While giving consideration to measures proposed to reduce or avoid significant adverse impacts of THPs  
35 on lands zoned TPZ, the RPF and Director shall include the following legal consideration regarding  
36 feasibility:

37 The Timberland Productivity Act restricts use of lands zoned Timberland Production Zone to growing and  
38 harvesting timber and compatible uses and establishes a presumption that timber harvesting is expected to  
39 and will occur on such lands.

40 (b) In determining whether a THP conforms to the intent of the Act, the Director shall be guided by the  
41 following principles:

42 (1) The goal of forest management on a specific ownership shall be the production or maintenance of  
43 forests which are healthy and naturally diverse, with a mixture of trees and understory plants, in which trees  
44 are grown primarily for the production of high quality timber products and which meet the following  
45 objectives:

46 (A) Achieve a balance between growth and harvest over time consistent with the harvesting methods  
47 within the rules of the Board.

48 (B) Maintain functional wildlife habitat in sufficient condition for continued use by the existing wildlife  
49 community within the planning watershed.

50 (C) Retain or recruit late and diverse seral stage habitat components for wildlife concentrated in the  
watercourse and lake zones and as appropriate to provide for functional connectivity between habitats.

(D) Maintain growing stock, genetic diversity, and soil productivity.

(2) Individual THPs shall be considered in the context of the larger forest and planning watershed in which they are located, so that biological diversity and watershed integrity are maintained within larger planning units and adverse cumulative impacts, including impacts on the quality and beneficial uses of water are reduced.

(3) While the responsibility for implementation of the Act and rules belongs to the Director and the Department, RPFs who prepare THPs plans have the responsibility to provide the Director with information about the plan and resource areas and the nature and purpose of the operations proposed which is sufficiently clear and detailed to permit the Director to exercise the discretion and make the determinations required by the Act and rules. The information in proposed plans shall also be sufficiently clear and detailed to permit adequate and effective review by responsible agencies and input by the public to assure that significant adverse individual and cumulative impacts are avoided or reduced to insignificance.

(c) The Director shall use the standards provided in these rules when reviewing plans to determine if they conform to the rules and regulations of the Board and the provisions of the Act. In specific circumstances provided in these rules, the Director shall disapprove plans because they conflict with the intent of the Act as interpreted by the Board.

(d) Due to the variety of individual circumstances of timber harvesting in California and the subsequent inability to adopt site-specific standards and regulations, these rules use judgmental terms in describing the standards that will apply in certain situations. By necessity, the RPF shall exercise professional judgment in applying these judgmental terms and in determining which of a range of feasible (see definition 14 CCR 895.1) silvicultural systems, operating methods and procedures contained in the rules shall be proposed in the plan to substantially lessen significant adverse impacts on the environment from timber harvesting. The Director also shall exercise professional judgment in applying these judgmental terms in determining whether a particular plan complies with the rules adopted by the Board and, accordingly, whether he or she should approve or disapprove a plan. The Director shall use these rules to identify the nature of and the limits to the professional judgment to be exercised by him or her administering these rules.

(e) Based upon site-specific conditions where, in the judgment of the RPF, the application of rules pertaining to how a timber operation will be conducted will not achieve the intent of the Act and rules, and where the RPF can describe a practice(s) which will meet or exceed the intent of the Act and rules, the RPF may prescribe an alternative practice(s) in lieu of those in the rules. The practice(s) shall:

- (1) be explained and justified by clear and convincing evidence in the plan;
- (2) be written so they provide clear instructions and enforceable standards for the timber operator; ~~and~~
- (3) provide a result(s) at least equal to that of the rule(s) to be supplanted; and
- (4) provide that, where appropriate for the alternative practice, the plan submitter is responsible for retaining an RPF to aid in interpreting the THP to the timber operator and timberland owner on a continuing basis to help assure compliance with the alternative.

(f) No alternative practice(s) as described in this section may be prescribed by an RPF or approved by the Director under this section in lieu of the following rules:

(1) The rules contained in Subchapter 2 (Application of Forest Practice Rules); Article 2 (Definitions, Ratings, and Standards) and Article 11 (Coastal Commission Special Treatment Areas) of Subchapter 4 (Coast Forest District Rules); Article 2 (Definitions, Ratings, and Standards) of Subchapter 5 (Northern Forest District Rules); Article 2 (Definitions, Ratings, and Standards) and Article 11 (Coastal Commission

Special Treatment Areas) of Subchapter 6 (Southern Forest District Rules); and Subchapter 7 (Administration) of Chapter 4, Division 1.5 of the California Administrative Code; or

(2) Any rule pertaining to the width of the special treatment area adjacent to a wild and scenic river declared pursuant to PRC 5093.50, et seq.; or

(3) Any rules or parts of rules that incorporate practices or standards specified in the Forest Practice Act.

(g) No alternative practice as described in this section can be used in counties which have had rules adopted under section 4516.5 of the Public Resources Code unless it is specifically adopted for the county.

(h) The Director shall not accept for inclusion in a THP any alternative practice as described in this section where two or more agencies listed in 4582.6 of the PRC and 14 CCR 1037.3 have submitted written comments which lead the Director to the conclusion that the proposed alternative will not meet the intent of the Act and rules, and the agencies participated in the review of the plan, including any on-the-ground inspection.

Note: Authority cited: Sections 4551 and 4553, Public Resources Code. Reference: Sections 4512, 4513, 4551.5 and 4582.75, Public Resources Code; Sections 51101, 51102 and 51115.1, Government Code; and *Laupheimer v. State* (1988) 200 Cal.App.3d 440; 246 Cal.Rptr. 82.

#### **Amend 14 CCR § 898.1 Review of Plan by Director**

The Director shall review plans to determine if they are in conformance with the provisions of PRC 4582.75 which requires that rules adopted by the Board shall be the only criteria employed by the Director in reviewing plans pursuant to PRC 4582.7.

(a) In reviewing plans, the Director shall apply all applicable rules promulgated by the Board.

(b) When in doubt as to the feasible alternative which best carries out the intent of the Act, the Director shall seek the advice of other state agencies charged with protecting the public interest in forest-related resources.

(c) In reviewing plans, the Director shall disapprove all plans which:

(1) Do not incorporate feasible silvicultural systems, operating methods and procedures that will substantially lessen significant adverse impacts on the environment.

(2) Would not meet the requirements of individual rules which provide a range of feasible alternatives through which to carry out the intent of the Act.

(3) Meet the special conditions for disapproval set by the Board in 14 CCR 898.2.

(d) If the Director, before the public comment period has ended, finds that a plan cannot be approved without a change in the conduct of timber operations, the Director shall, consistent with the rules and procedures adopted by the Board, communicate with the preparer of the plan, explain any probable causes for disapproval and suggest possible mitigation measures. The preparer of the plan shall then have the opportunity to respond to the Director and provide appropriate mitigation measures prior to the end of the public comment period. Any significant changes (as described in 1036(b)) substantial deviations (as described in 895.1), except as covered in 1040, in the conduct of a timber operation, or the inclusion of significant new information, made between the close of public comment and the date of the Director's decision will require returning the plan to the review team and reopening the public comment period for ten

working days. Public members who participated in the review of the plan will be notified of the significant changes in the conduct of the timber operation and/or the significant new information and the reopening of the comment period.

(e) If the Director disapproves a plan, the Director shall, consistent with the rules and procedures adopted by the Board, provide to the preparer of the plan written reasons for disapproval.

(f) If the Director finds no feasible, less damaging alternatives that conform with the rules, the Director shall approve such plan unless approval threatens to cause immediate, significant, and long-term harm to the natural resources of the state. In the event of such a threat, the Director shall withhold decision on the plan and shall follow procedures developed by the Board pursuant to PRC 4555.

(g) If the Director determines that (1) all feasible mitigation measures or alternatives which are available to substantially reduce or avoid any significant adverse impacts of a THP have been selected; (2) significant adverse impacts remain; (3) the plan otherwise complies with the rules of the Board; and (4) an emergency situation does not exist under PRC Section 4555, the Director shall not approve the plan unless the Director also determines that the benefits of the THP outweigh any significant, unavoidable adverse impacts. If the Director makes such a determination and approves the THP, the Notice of Conformance shall include an explanation of the basis for finding that the conditions 1-3 herein are met and for determining that the THP's benefits outweigh any unavoidable significant adverse impacts. In making such a determination for THPs on lands zoned TPZ the Director shall give consideration to the Legislature's objectives in enacting the Timberland Productivity Act of 1982 ("TPA") and the objectives of the FPA including sustained forest productivity. The TPA-associated benefits to be weighed against any significant avoidable adverse impacts shall include, but not be limited to:

(1) ensuring consistency with the restriction of the use of TPZ lands to growing and harvesting timber and compatible uses;

(2) making cumulative progress toward (a) realizing the productive potential of the forest resources of the state and (b) providing a favorable climate for long-term investment in forest resources, thereby discouraging the premature and unnecessary conversion of timberland to urban and other uses; and

(3) ensuring consistency with the Legislature's declaration that timber operations may reasonably be expected to and will occur on lands zoned TPZ.

(h) In determining whether the public benefits of the THP outweigh any unavoidable significant adverse impacts pursuant to (g) above, the Director may request information as needed to evaluate potential job loss, negative economic impacts on the community, business closings, loss of property by owners, probable conversion to other uses, estate taxes and other factors as appropriate.

Note: Authority cited: Sections 4582, Public Resources Code. Reference: Sections 4555, 4582.7 and 4582.75, Public Resources Code; Sections 51101, 51102 and 51115.1, Government Code; and *Laupheimer v. State* (1988) 200 Cal.App.3d 440; 246 Cal.Rptr. 82.

#### **Amend 14 CCR §§ 912.9 [932.9, 952.9] Cumulative Impacts Assessment Checklist**

##### **STATE OF CALIFORNIA BOARD OF FORESTRY CUMULATIVE IMPACTS ASSESSMENT**

(1) Do the assessment area(s) of resources that may be affected by the proposed project contain any past, present, or reasonably foreseeable probable future projects? Yes \_\_\_ No \_\_\_  
If the answer is yes, identify the project(s) and affected resource subject(s).

(2) Are there any continuing, significant adverse impacts from past land use activities that may add to the impacts of the proposed project? Yes \_\_\_\_ No \_\_\_\_ If the answer is yes, identify the activities, describing their location, impacts and affected resource subject(s).

(3) Will the proposed project, as presented, in combination with past, present, and reasonably foreseeable probable future projects identified in items (1) and (2) above, have a reasonable potential to cause or add to significant cumulative impacts in any of the following resource subjects?

	Yes after mitigation (a)	No after mitigation (b)	No reasonably potential significant effects (c)
1. Watershed			
2. Soil Productivity			
3. Biological			
4. Recreation			
5. Visual			
6. Traffic			
7. Other			

a) Yes, means that potential significant adverse cumulative impacts are left after application of the forest practice rules and mitigations or alternatives proposed by the plan submitter.

b) No after mitigation means that any potential for the proposed timber operation to cause or add to significant adverse cumulative impacts by itself or in combination with other projects has been ~~substantially~~ reduced to insignificance or avoided by mitigation measures or alternatives proposed in the THP and application of the forest practice rules.

c) No reasonably potential significant cumulative effects means that the operations proposed under the THP do not have a reasonable potential to join with the impacts of any other project to cause, add to, or constitute significant adverse cumulative impacts.

(4) If column (a) is checked in (3) above describe why the expected impacts cannot be feasibly mitigated or avoided and what mitigation measures or alternatives were considered to reach this determination. If

column (b) is checked in (3) above describe what mitigation measures have been selected which will substantially reduce or avoid reasonably potential significant cumulative impacts except for those mitigation measures or alternatives mandated by application of the rules of the Board of Forestry.

(5) Provide a brief description of the assessment area used for each resource subject.

(6) List and briefly describe the individuals, organizations, and records consulted in the assessment of cumulative impacts for each resource subject. Records of the information used in the assessment shall be provided to the Director upon request.

## **BOARD OF FORESTRY TECHNICAL RULE ADDENDUM NO. 2 CUMULATIVE IMPACTS ASSESSMENT**

### *Introduction*

The purpose of this addendum is to guide the assessment of cumulative impacts as required in 14 CCR 898 and 1034 that may occur as a result of proposed timber operations. This assessment shall include evaluation of both on-site and off-site interactions of proposed project activities with the impacts of past and reasonably foreseeable future projects.

In conducting an assessment, the RPF must distinguish between on-site impacts that are mitigated by application of the Forest Practice Rules and the interactions of proposed activities (which may not be significant when considered alone) with impacts of past and reasonably foreseeable future projects.

Resource subjects to be considered in the assessment of cumulative impacts are described in the Appendix.

The RPF preparing a THP shall conduct an assessment based on information that is reasonably available before submission of the THP. RPFs are expected to submit sufficient information to support their findings if significant issues are raised during the Department's review of the THP.

Information used in the assessment of cumulative impacts may be supplemented during the THP review period. Agencies participating in plan review may provide input into the cumulative impacts assessment based upon their area of expertise. Agencies should support their recommendations with documentation.

The Department, as lead agency, shall make the final determination regarding assessment sufficiency and the presence or absence of significant cumulative impacts. This determination shall be based on a review of all sources of information provided and developed during review of the Timber Harvesting Plan.

### *Identification of Resource Areas*

The RPF shall establish and briefly describe the geographic assessment area within or surrounding the ~~THP plan~~ for each resource subject to be assessed and shall briefly explain the rationale for establishing the resource area. This ~~may shall~~ be a narrative description ~~or may and shall~~ be shown on a map where a map adds clarity to the assessment.

### *Identification of Information Sources*

The RPF shall list and briefly describe the individuals, organizations, and records used as sources of information in the assessment of cumulative impacts, including references for listed records and the names, affiliations, addresses, and phone numbers of specific individuals contacted. Records of information used in the assessment shall be provided to the Director upon request.

Common sources of information for cumulative effects assessment are identified below. Sources to be used will depend upon the complexity of individual situations and the amount of information available from

other plans. Sources not listed below may have to be consulted based on individual circumstances. Not all sources of information need to be consulted for every THP.

1. Consultation with Experts and Organizations:

- |                                 |                                   |
|---------------------------------|-----------------------------------|
| (a) County Planning Department; | (b) Biologists;                   |
| (c) Geologists;                 | (d) Soil Scientists;              |
| (e) Hydrologists;               | (f) Federal Agencies;             |
| (g) State Agencies;             | (h) Public and private utilities. |

2. Records Examined:

- |  |                                    |
|--|------------------------------------|
| (a) Soil Maps;                                 | (b) Geology Maps;                  |
| (c) Aerial Photographs;                        | (d) Natural Diversity Data Base;   |
| (e) THP Records;                               | (f) Special Environmental Reports; |
| (g) Basin Plans;                               | (h) Fire History Maps;             |
| (i) Relevant Federal Agency Documents or Plans |                                    |

As provided in Section 898 of the rules, the RPF or supervised designee and the plan submitter must consult information sources that are reasonably available.

*Past and Future Activities*

Past and future projects included in the cumulative impacts assessment shall be described as follows:

A. Identify and briefly describe the location of past and reasonably foreseeable probable future projects as defined in 14 CCR 895.1 within described resource assessment areas.

B. Identify and give the location and description of any known, continuing significant environmental problems caused by past projects as defined in 14 CCR 895.1.

The RPF who prepares the plan or supervised designee shall obtain information from plan submitters (timberland or timber owner), and from appropriate agencies, landowners, and individuals about past, and future land management activities and shall consider past experience, if any, in the assessment area related to past impacts and the impacts of the proposed operations, rates of recovery, and land uses. A poll of adjacent land owners is ~~not required~~ encouraged and may be required by the Director to determine such activities and significant adverse environmental problems on adjacent ownerships.

**Appendix  
Technical Rule Addendum # 2**

In evaluating cumulative impacts, the RPF shall consider the factors set forth herein.

A. Watershed Resources

Cumulative Watershed Effects (CWEs) occur within and near bodies of water or significant wet areas, where individual impacts are combined to produce an effect that is greater than any of the individual impacts acting alone. Factors to consider in the evaluation of cumulative watershed impacts are listed below.

1. Impacts to watershed resources within the Watershed Assessment Area (WAA) ~~Watershed impacts~~ shall be evaluated based on significant on-site and ~~down-stream~~ off-site cumulative effects on beneficial uses of water, as defined and listed in applicable Water Quality Control Plans.

2. Watershed effects produced by timber harvest and other activities may include one or more of the following:

- Sediment
- Water temperature
- Organic debris
- Chemical contamination
- Peak flow

The following general guidelines ~~may~~ shall be appropriately used when evaluating watershed impacts. The factors described are general and may not be appropriate for all situations. ~~No a~~ Actual measurements are intended may be required if needed to evaluate significant environmental effects. ~~However, The plan must comply with the~~ quantitative or narrative water-quality objectives set forth in an applicable Water Quality Control Plan ~~must be complied with.~~

a. Sediment Effects

Sediment-induced CWEs occur when earth materials transported by surface or mass wasting erosion enter a stream or stream system at separate locations and are then combined at a downstream location to produce a change in water quality or channel condition. The eroded materials can originate from the same or different projects. Potentially adverse changes are most likely to occur in the following locations and situations:

- Downstream areas of reduced stream gradient where sediment from a new source may be deposited in addition to sediment derived from existing or other new sources.
  - Immediately downstream from where sediment from a new source is combined with sediment from other new or existing sources and the combined amount of sediment exceeds the transport capacity of the stream.
  - Any location where sediment from new sources in combination with suspended sediment from existing or other new sources significantly reduces the survival of fish or other aquatic organisms or reduces the quality of waters used for domestic, agricultural, or other beneficial uses.
  - Channels with relatively steep gradients which contain accumulated sediment and debris that can be mobilized by sudden new sediment inputs, such as debris flows, resulting in debris torrents and severe channel scouring.
- Potentially significant adverse impacts of cumulative sediment inputs may include:
- Increased treatment needs or reduced suitability for domestic, municipal, industrial, or agricultural water use.
  - Direct mortality of fish and other aquatic species.
  - Reduced viability of aquatic organisms or disruption of aquatic habitats and loss of stream productivity caused by filling of pools and plugging or burying streambed gravel.
  - Accelerated channel filling (aggradation) resulting in loss of streamside vegetation and stream migration that can cause accelerated bank erosion.
  - Accelerated filling of downstream reservoirs, navigable channels, water diversion and transport facilities, estuaries, and harbors.
  - Channel scouring by debris flows and torrents.



1 - Nuisance to or reduction in water related recreational activities.

2 Situations where sediment production potential is greatest include:

3 - Sites with high or extreme erosion hazard ratings.

4 - Sites which are tractor logged on steep slopes.

5 - Unstable areas.

6 b. Water Temperature Effect

7 Water temperature related CWEs are changes in water chemistry or biological properties caused by the  
8 combination of solar warmed water from two or more locations (in contrast to an individual effect that  
9 results from impacts along a single stream segment) where natural cover has been removed. Cumulative  
10 changes in water temperature are most likely to occur in the following situations:

11 - Where stream bottom materials are dark in color.

12 - Where water is shallow and has little underflow.

13 - Where removal of streamside canopy results in substantial, additional solar exposure or increased contact  
14 with warm air at two or more locations along a stream.

15 - Where removal of streamside canopy results in substantial, additional solar exposure or increased contact  
16 with warm air at two or more streams that are tributary to a larger stream.

17 - Where water temperature is near a biological threshold for specific species.

18 Significant adverse impacts of cumulative temperature increases include:

19 - Increases in the metabolic rate of aquatic species.

20 - Direct increases in metabolic rate and/or reduction of dissolved oxygen levels, either of which can cause  
21 reduced vigor and death of sensitive fish and other sensitive aquatic organisms.

22 - Increased growth rates of microorganisms that deplete dissolved oxygen levels or increased disease  
23 potential for organisms.

24 - Stream biology shifts toward warmer water ecosystems.

25 c. Organic Debris Effects

26 CWEs produced by organic debris can occur when logs, limbs, and other organic material are introduced  
27 into a stream or lake at two or more locations. Decomposition of this debris, particularly the smaller sized  
28 and less woody material, removes dissolved oxygen from the water and can cause impacts similar to those  
29 resulting from increased water temperatures. Introduction of excessive small organic debris can also  
30 increase water acidity.

31 Large organic debris is an important stabilizing agent that should be maintained in small to medium size,  
32 steep gradient channels, but the sudden introduction of large, unstable volumes of bigger debris (such as  
33 logs, chunks, and larger limbs produced during a logging operation) can obstruct and divert streamflow  
34 against erodible banks, block fish migration, and may cause debris torrents during periods of high flow.

35 Removing streamside vegetation can reduce the natural, annual inputs of litter to the stream (after  
36 decomposition of logging-related litter). This can cause both a drop in food supply, and resultant  
37 productivity, and a change in types of food available for organisms that normally dominate the lower food  
38 chain of streams with an overhanging or adjacent forest canopy.

39 d. Chemical Contamination Effects

40 Potential sources of chemical CWEs include run-off from roads treated with oil or other dust-retarding  
41 materials, direct application or run-off from pesticide treatments, contamination by equipment fuels and oils,  
42 and the introduction of nutrients released during slash burning or wildfire from two or more locations.

43 e. Peak Flow Effects

44 CWEs caused by management induced peak flow increases in streams during storm events are difficult to  
45 anticipate. Peak flow increases may result from management activities that reduce vegetative water use or  
46 produce openings where snow can accumulate (such as clear-cutting and site preparation) or that change the  
47 timing of flows by producing more efficient runoff routing (such as insloped roads). These increases,  
48 however, are likely to be small relative to natural peak flows from medium and large storms. Research to  
49 date on the effects of management activities on channel conditions indicates that channel changes during  
50 storm events are primarily the result of large sediment inputs.

3. Watercourse Condition

The watershed impacts of past upstream and on-site projects are often reflected in the condition of stream channels on the project area. Following is a list of channel characteristics and factors that may be used to describe current watershed conditions and to assist in the evaluation of potential project impacts:

◇ Gravel Embedded - Spaces between stream gravel filled with sand or finer sediments. Gravel are often in a tightly packed arrangement.

◇ Pools Filled - Former pools or apparent pool areas filled with sediments leaving few areas of deep or "quiet" water relative to stream flow or size.

◇ Aggrading - Stream channels filled or filling with sediment that raises the channel bottom elevation. Pools will be absent or greatly diminished and gravel may be embedded or covered by finer sediments. Streamside vegetation may be partially or completely buried, and the stream may be meandering or cutting into its banks above the level of the former streambed. Depositional areas in aggrading channels are often increasing in size and number.

◇ Bank Cutting - Can either be minor or severe and is indicated by areas of fresh, unvegetated soil or alluvium exposed along the stream banks, usually above the low-flow channel and often with a vertical or undercut face. Severe bank cutting is often associated with channels that are downcutting, which can lead to over-steepened banks, or aggrading, which can cause the channel to migrate against slopes that were previously above the high flow level of the stream.

◇ Bank Mass Wasting - Channels with landslides directly entering the stream system. Slide movement may be infrequent (single events) or frequent (continuing creep or periodic events).

◇ Downcutting - Incised stream channels with relatively clean, uncluttered beds cut below the level of former streamside vegetation and with eroded, often undercut or vertical, banks.

◇ Scoured - Stream channels that have been stripped of gravel and finer bed materials by large flow events or debris torrents. Streamside vegetation has often been swept away, and the channel has a raw, eroded appearance.

◇ Organic Debris - Debris in the watercourse can have either a positive or negative impact depending on the amount and stability of the material. Some stable organic debris present in the watercourse helps to form pools and retard sediment transport and downcutting in small to medium sized streams with relatively steep gradients. Large accumulations of organic debris can block fish passage, block or divert streamflow, or could be released as a debris flow.

◇ Stream-Side Vegetation - Stream-side vegetation and near-stream vegetation provide shade or cover to the stream, which may have an impact on water temperature, and provides root systems that stabilize streambanks and floodplains and filter sediment from flood flows.

◇ Recent Floods - A recent high flow event that would be considered unusual in the project area may have an impact on the current watercourse condition.

#### B. Soil Productivity

Cumulative soil productivity impacts occur when the effects of two or more activities, from the same or different projects, combine to produce a significant decrease in soil biomass production potential. These impacts most often occur on-site within the project boundary, and the relative severity of productivity losses for a given level of impact generally increases as site quality declines. The primary factors influencing soil productivity that can be affected by timber operations include:

◇ Organic matter loss.

◇ Soil compaction.

◇ Surface soil loss.

◇ Growing space loss.

The following general guidelines may be used when evaluating soil productivity impacts.—~~No actual measurements are intended.~~

##### 1. Organic Matter Loss

Displacement or loss of organic matter can result in a long term loss of soil productivity. Soil surface litter and downed woody debris are the store-house of long term soil fertility, provide for soil moisture conservation, and support soil microorganisms that are critical in the nutrient cycling and uptake process.

1 Much of the chemical and microbial activity of the forest nutrient cycle is concentrated in the narrow zone at  
2 the soil and litter interface.

3 Displacement of surface organic matter occurs as a result of skidding, mechanical site preparation, and  
4 other land disturbing timber operations. Actual loss of organic matter occurs as a result of burning or  
5 erosion. The effects of organic matter loss on soil productivity may be expressed in terms of the percentage  
6 displacement or loss as a result of all project activities.

#### 7 2. Surface Soil Loss

8 The soil is the storehouse of current and future site fertility, and the majority of nutrients are held in the  
9 upper few inches of the soil profile. Topsoil displacement or loss can have an immediate effect on site  
10 productivity, although effects may not be obvious because of reduced brush competition and lack of side-  
11 by-side comparisons or until the new stand begins to fully occupy the available growing space.

12 Surface soil is primarily lost by erosion or by displacement into windrows, piles, or fills. Mass wasting is  
13 a special case of erosion with obvious extreme effects on site productivity. The impacts of surface soil loss  
14 may be evaluated by estimating the proportion of the project area affected and the depth of loss or  
15 displacement.

#### 16 3. Soil Compaction

17 Compaction affects site productivity through loss of large soil pores that transmit air and water in the soil  
18 and by restricting root penetration. The risk of compaction is associated with:

- 19 - Depth of surface litter. - Soil structure.
- 20 - Soil organic matter content. - Presence and amount of coarse fragments in the soil.
- 21 - Soil texture. - Soil moisture status.

22 Compaction effects may be evaluated by considering the soil conditions, as listed above, at the time of  
23 harvesting activities and the proportion of the project area subjected to compacting forces.

#### 24 4. Growing Space Loss

25 Forest growing space is lost to roads, landings, permanent skid trails, and other permanent or non-restored  
26 areas subjected to severe disturbance and compaction.

27 The effects of growing space loss may be evaluated by considering the overall pattern of roads, etc.,  
28 relative to feasible silvicultural systems and yarding methods.

### 29 C. Biological Resources

30 Biological assessment areas will vary with the species being evaluated and its habitat. Factors to consider  
31 in the evaluation of cumulative biological impacts include:

32 1. Any known rare, threatened, or endangered species or ~~species of special concern~~ sensitive species (as  
33 described in the Forest Practice Rules) that may be directly or indirectly affected by project activities.

34 Significant cumulative effects on listed species may be expected from the results of activities over time  
35 which combine to have a substantial effect on the species or on the habitat of the species.

36 2. Any significant, known wildlife or fisheries resource concerns within the immediate project area and  
37 the biological assessment area (e.g. loss of oaks creating forage problems for a local deer herd, species  
38 requiring special elements, ~~species of special concern~~ sensitive species, and significant natural areas).

39 Significant cumulative effects may be expected where there is a substantial reduction in required habitat or  
40 the project will result in substantial interference with the movement of resident or migratory species.

41 The significance of cumulative impacts on non-listed species viability should be determined relative to the  
42 benefits to other non-listed species. For example, the manipulation of habitat results in conditions which  
43 discourage the presence of some species while encouraging the presence of others.

44 3. The aquatic and near-water habitat conditions on the THP and immediate surrounding area. Habitat  
45 conditions of major concern are: Pools and riffles, Large woody material in the stream, Near-water  
46 vegetation.

47 Much of the information needed to evaluate these factors is described in the preceding Watershed  
48 Resources section. A general discussion of their importance is given below:

#### 49 a. Pools and Riffles

50 Pools and riffles affect overall habitat quality and fish community structure. Streams with little structural  
complexity offer poor habitat for fish communities as a whole, even though the channel may be stable.

Structural complexity is often lower in streams with low gradients, and filling of pools can reduce stream productivity.

b. Large Woody Material

Large woody debris in the stream plays an important role in creating and maintaining habitat through the formation of pools. These pools comprise important feeding locations that provide maximum exposure to drifting food organisms in relatively quiet water. Removal of woody debris can reduce frequency and quality of pools.

c. Near-Water Vegetation

Near-water vegetation provides many habitat benefits, including: shade, nutrients, vertical diversity, migration corridors, nesting, roosting, and escape. Recruitment of large woody material is also an important element in maintaining habitat quality.

4. The biological habitat condition of the THP and immediate surrounding area. Significant factors to consider are:

- |                              |   |
|------------------------------|---|
| ◇ Snags/den trees            | ◇ Hardwood cover                              |
| ◇ Downed, large woody debris | ◇ Late seral (mature) forest characteristics. |
| ◇ Multistory canopy          | ◇ Late seral habitat continuity               |
| ◇ Road density               |   |

The following general guidelines may be used when evaluating biological habitat. The factors described are general and may not be appropriate for all situations.—No actual measurement is intended. The THP preparer must also be alert to the need to consider factors which are not listed below. Each set of ground conditions are unique and the analysis conducted must reflect those conditions.

**a. Snags/Den/Nest Trees:** Snags, den trees, nest trees and their recruitment are required elements in the overall habitat needs of more than 160 wildlife species. Many of these species play a vital role in maintaining the overall health of timberlands. Snags of greatest value are >16" DBH and 20 ft. in height. The degree of snag recruitment over time should be considered. Den trees are partially live trees with elements of decay which provide wildlife habitat. Nest trees have importance to birds classified as a sensitive species.

**b. Downed large, woody debris:** Large downed logs (particularly conifers) in the upland and near-water environment in all stages of decomposition provide an important habitat for many wildlife species. Large woody debris of greatest value consists of downed logs >16" diameter at the large end and >20 feet in length.

**c. Multistory canopy:** Upland multistoried canopies have a marked influence on the diversity and density of wildlife species utilizing the area. More productive timberland is generally of greater value and timber site capability should be considered as a factor in an assessment. The amount of upland multistoried canopy may be evaluated by estimating the percent of the stand composed of two or more tree layers on an average per acre basis.

Near-water multistoried canopies in riparian zones that include conifer and hardwood tree species provide an important element of structural diversity to the habitat requirements of wildlife. Near-water multistoried canopy may be evaluated by estimating the percentage of ground covered by one or more vegetative canopy strata, with more emphasis placed on shrub species along Class III and IV streams (14 CCR 916.5, 936.5, or 956.5).

**d. Road Density:** Frequently traveled permanent and secondary roads have a significant influence on wildlife use of otherwise suitable habitat. Large declines in deer and bear use of areas adjacent to open roads are frequently noted. Road density influence on large mammal habitat may be evaluated by estimating the miles of open permanent and temporary roads, on a per-section basis, that receive some level

of maintenance and are open to the public. This assessment should also account for the effects of vegetation screening and the relative importance of an area to wildlife on a seasonal basis (e.g. winter range).

**e. Hardwood Cover:** Hardwoods provide an important element of habitat diversity in the coniferous forest and are utilized as a source of food and/or cover by a large proportion of the state's bird and mammal species. Productivity of deer and other species has been directly related to mast crops. Hardwood cover can be estimated using the basal area per acre provided by hardwoods of all species.

**f. Late Seral (Mature) Forest Characteristics:** Determination of the presence or absence of mature and over-mature forest stands and their structural characteristics provides a basis from which to begin an assessment of the influence of management on associated wildlife. These characteristics include large trees as part of a multilayered canopy and the presence of large numbers of snags and downed logs that contribute to an increased level of stand decadence. Late seral stage forest amount may be evaluated by estimating the percentage of the land base within the project and the biological assessment area occupied by areas conforming to the following definitions:

Forests not previously harvested should be at least 80 acres in size to maintain the effects of edge. This acreage is variable based on the degree of similarity in surrounding areas. The area should include a multi-layered canopy, two or more tree species with several large coniferous trees per acre (smaller subdominant trees may be either conifers or hardwoods), large conifer snags, and an abundance of large woody debris.

Previously harvested forests are in many possible stages of succession and may include remnant patches of late seral stage forest which generally conform to the definition of unharvested forests but do not meet the acreage criteria.

**g. Late Seral Habitat Continuity:** Projects containing areas meeting the definitions for late seral stage characteristics must be evaluated for late seral habitat continuity. The fragmentation and resultant isolation of late seral habitat types is one of the most significant factors influencing the sustainability of wildlife populations not adapted to edge environments.

This fragmentation may be evaluated by estimating the amount of the on-site project and the biological assessment area occupied by late seral stands greater than 80 acres in size (considering the mitigating influence of adjacent and similar habitat, if applicable) and less than one mile apart or connected by a corridor of similar habitat.

**h. Special Habitat Elements:** The loss of a key habitat element may have a profound effect on a species even though the habitat is otherwise suitable. Each species may have several key limiting factors to consider. For example, a special need for some large raptors is large decadent trees/snags with broken tops or other features. Deer may have habitat with adequate food and cover to support a healthy population size and composition but dependent on a few critical meadows suitable for fawning success. These and other key elements may need special protection.

**D. RECREATIONAL RESOURCES:** The recreational assessment area is generally the area that includes the logging area plus 300 ft.

To assess recreational cumulative impacts:

1. Identify the recreational activities involving significant numbers of people in and within 300 ft. of logging area (e.g., fishing, hunting, hiking, picnicking, camping).

2. Identify any recreational Special Treatment Areas described in the Board of Forestry rules on the plan area or contiguous to the area.

**E. VISUAL RESOURCES:** The visual assessment area is generally the logging area that is readily visible to significant numbers of people who are no further than three miles from the timber operation. To assess visual cumulative effects:

1. Identify any Special Treatment Areas designated as such by the Board of Forestry because of their visual values.

2. Determine how far the proposed timber operation is from the nearest point that significant numbers of people can view the timber operation. At distances of greater than 3 miles from viewing points activities are not easily discernible and will be less significant.

3. Identify the manner in which the public identified in 1 and 2 above will view the proposed timber operation (from a vehicle on a public road, from a stationary public viewing point or from a pedestrian pathway).

**F. VEHICULAR TRAFFIC IMPACTS:** The traffic assessment area involves the first roads not part of the logging area on which logging traffic must travel. To assess traffic cumulative effects:

1. Identify whether any publicly owned roads will be used for the transport of wood products.
2. Identify any public roads that have not been used recently for the transport of wood products and will be used to transport wood products from the proposed timber harvest.
3. Identify any public roads that have existing traffic or maintenance problems.
4. Identify how the logging vehicles used in the timber operation will change the amount of traffic on public roads, especially during heavy traffic conditions.

Note: Authority cited: Sections 4551 and 21080.5, Public Resources Code. Reference: Sections 4512, 4513, 4551.5 and 4582.6, 21000(g), 21002 and 21080.5, Public Resources Code; *Natural Resources Defense Council, Inc. v. Arcata Natl. Corp.* (1976) 59 Cal. App.3d 959; 131 Cal.Rptr. 172; and *Laupheimer v. State* (1988) 200 Cal.App.3d 440; 246 Cal.Rptr. 82.

#### **Amend 14 CCR §§ 916 [936, 956] Intent of Watercourse and Lake Protection**

The purpose of this article is to insure the protection of the beneficial uses that are derived from the physical form, water quality, and biological characteristics of watercourses and lakes. It is the intent of the Board to restore, enhance, and maintain the productivity of timberlands while providing equal consideration for the beneficial uses of water. ~~Further, it is~~ It is the intent of the Board to clarify and assign responsibility, to recognize potential impacts of timber operations on the beneficial uses of water, and to adopt feasible measures to prevent water pollution related to timber harvesting.

#### **ALTERNATIVE 1:**

The purpose of this article is to insure the protection of the beneficial uses that are derived from the physical form, water quality, and biological characteristics of watercourses and lakes. It is the intent of the Board to restore, enhance, and maintain the productivity of timberlands while providing equal consideration for the beneficial uses of water. ~~Further, it is~~ It is the intent of the Board to clarify and assign responsibility, to recognize potential impacts of timber operations on the beneficial uses of water, and to adopt feasible measures to prevent water pollution related to timber harvesting. Further, it is the intent of the Board that the evaluation of the conditions of the physical form, water quality, and biological characteristics of watercourses and lakes, including cumulative impacts affecting the beneficial uses of water on both the area

of planned logging operations and in the Watershed Assessment Area (WAA), and the measures taken or prescribed for the restoration, enhancement, and maintenance of the beneficial uses of water be documented in a manner which will afford essential understanding of conditions and of protective and corrective measures for review and implementation by all involved parties.

## **ALTERNATIVE 2:**

The purpose of this article is to insure the protection of the beneficial uses that are derived from the physical form, water quality, and biological characteristics of watercourses and lakes. It is the intent of the Board to restore, enhance, and maintain the productivity of timberlands while providing equal consideration for the beneficial uses of water. ~~Further, it~~ It is the intent of the Board to clarify and assign responsibility, to recognize potential impacts of timber operations on the beneficial uses of water, and to adopt feasible measures to prevent water pollution related to timber harvesting. Further, it is the intent of the Board that the evaluations that are made, and the measures that are taken or prescribed, be documented in a manner that clearly and accurately represents those existing conditions and those measures. "Evaluations made" pertain to the assessment of the conditions of the physical form, water quality, and biological characteristics of watercourses and lakes, including cumulative impacts affecting the beneficial uses of water on both the area of planned logging operations and in the Watershed Assessment Area (WAA). "Measures taken" pertain to the procedures used or prescribed for the restoration, enhancement, and maintenance of the beneficial uses of water.

Note: Authority cited: Sections 4551, 4562.7 and 21000(g), Public Resources Code. Reference: Sections 4512, 4513, 4551.5, 4552, 4562.5, 4562.7, 21001(b), (f), 21002 and 21002.1, Public Resources Code; Sections 100, 1243, 1243.5, 13001, 13001(f), 13146 and 13147, Water Code; and 33 USC Section 1288(b)(2)(F).

## **Amend 14 CCR §§ 916.2 [936.2, 956.2] Protection of the Beneficial Uses of Water**

(a) The measures used to protect the beneficial uses of water for each watercourse and lake shall be determined by the following:

- (1) The quality and beneficial uses of water as specified by the applicable water quality control plan.
- (2) The restorable uses of water for fisheries as identified by the Department of Fish and Game.
- (3) The biological needs of the fish and wildlife species provided by the riparian habitat.

(4) Sensitive near stream and upslope conditions as specified in 14 CCR 916.4(a), [936.4(a), 956.4(a)] and the Appendix of Technical Rule Addendum No. 2.

(5) The attainment of conditions which will provide for the protection of listed species.

(b) The State's waters are grouped into four classes based on key beneficial uses. These classifications shall be used to determine the appropriate protection measures to be applied to the State's waters during the conduct of timber operations. The basis for classification (characteristics and key beneficial uses) and the range of protective measures applicable to each class are contained in Sections 916, 916.4(c), 916.5 [936, 936.4(c), 936.5; 956, 956.4(c), 956.5].

(c) When the protective measures contained in 14 CCR 916.5 [936.5, 956.5] are not adequate to provide protection to beneficial uses, feasible protective measures shall be developed by the RPF or proposed by the director under the provisions of 14 CCR 916.6 [936.6, 956.6], Alternative Watercourse and Lake Protection, and incorporated in the THP when approved by the Director.

Note: Authority cited: Sections 4551, 4562.7 and 21000(g), Public Resources Code. Reference: Sections 4512, 4513, 4551.5 and 21001(f), Public Resources Code; 40 CFR 35.1505; and 33 USC Section 1288(b)(2)(F).

#### **Amend 14 CCR §§ 916.4 [936.4, 956.4] Watercourse and Lake Protection**

(a) The RPF or supervised designee shall conduct a field examination of all lakes and watercourses and shall map all lakes and watercourses which contain or conduct Class I, II, III or IV waters. As part of this field examination, the RPF or supervised designee shall evaluate areas near, and areas upslope of, watercourses and lakes for sensitive conditions including, but not limited to, ~~use of existing and proposed roads/skidtrails and landings within the standard WLPZ width,~~ unstable and erodible watercourse banks, unstable upslope areas, degraded riparian forest, debris jam potential, flow capacity and changeable channels, overflow channels, and flood prone areas. The RPF shall consider these conditions when proposing WLPZ widths and protection measures, including retention and restoration of sustainable riparian forest. The THP or other planning document shall identify such conditions, including where they may interact with proposed timber operations, ~~to~~ that individually or cumulatively significantly and adversely affect the beneficial uses of water, and shall describe and locate measures to protect and restore the beneficial uses of water. The mapping of these identified conditions and their protective measures shall be done at a scale of at least 1":200'. In site-specific cases, the mapping of critical locations of corrective work and logging operation impacts shall be done at a scale of at least 1":20' when the Director determines it is necessary to evaluate the plan. The evaluation and mapping shall, at a minimum, include the known



1 location and restorable extent of spawning and rearing habitat of both anadromous and resident salmonids.  
2  
3 Habitat typing for all current and restorable habitat for these fish species shall be part of the plan. The  
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5 RPF(s) and supervised designee(s) that perform the described tasks shall be adequately trained in the  
6  
7 required identification, evaluation, mitigation, and mapping skills.  
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11 **ALTERNATIVE 1:**  
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13 (a) The RPF or supervised designee shall conduct a field examination of all lakes and watercourses and  
14 shall map all lakes and watercourses which contain or conduct Class I, II, III or IV waters. As part of this  
15 field examination, the RPF or supervised designee shall evaluate areas near, and areas upslope of,  
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17 watercourses and lakes for sensitive conditions including, but not limited to, ~~use of existing and proposed~~  
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19 roads/skidtrails and landings within the standard WLPZ width, unstable and erodible watercourse banks,  
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21 unstable upslope areas, degraded riparian forest, debris jam potential, flow capacity and changeable  
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23 channels, overflow channels, and flood prone areas. The RPF shall consider these conditions when  
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25 proposing WLPZ widths and protection measures, including retention and restoration of sustainable riparian  
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27 forest. The THP or other planning document shall identify such conditions, including where they may  
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29 interact with proposed timber operations, ~~to~~ that individually or cumulatively significantly and adversely  
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31 affect the beneficial uses of water, and shall describe and locate measures to protect and restore the  
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33 beneficial uses of water. The mapping of these identified conditions and their protective measures shall be  
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35 done at a scale of at least 1":200'. In site-specific cases, the mapping of critical locations of corrective work  
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37 and logging operation impacts shall be done at a scale of at least 1":20' when the Director determines it is  
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39 necessary to evaluate the plan.  
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45 **ALTERNATIVE 2:**  
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47 (a) The RPF or supervised designee shall conduct a field examination of all lakes and watercourses and  
48 shall map all lakes and watercourses which contain or conduct Class I, II, III or IV waters. As part of this  
49 field examination, the RPF or supervised designee shall evaluate areas near, and areas upslope of,  
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1 watercourses and lakes for sensitive conditions including, but not limited to, ~~use of existing and proposed~~  
2 ~~roads/skidtrails and landings within the standard WLPZ width~~, unstable and erodible watercourse banks,  
3 ~~unstable upslope areas, degraded riparian forest~~, debris jam potential, flow capacity and changeable  
4 channels, overflow channels, and flood prone areas. The RPF shall consider these conditions when  
5 proposing WLPZ widths and protection measures, including retention and restoration of sustainable riparian  
6 forest. The THP or other planning document shall identify such conditions, including where they may  
7 interact with proposed timber operations, ~~to~~ that individually or cumulatively significantly and adversely  
8 affect the beneficial uses of water, and shall describe and locate measures to protect and restore the  
9 beneficial uses of water. The mapping of these identified conditions and their protective measures shall be  
10 sufficiently clear and detailed to permit the Director and the other review team representatives to evaluate  
11 the potential environmental impacts of timber operations required by the Act and rules. The evaluation and  
12 mapping shall, at a minimum, include the known location and restorable extent of spawning and rearing  
13 habitat of both anadromous and resident salmonids. Habitat typing for all current and restorable habitat for  
14 these fish species shall be part of the plan. The RPF(s) and supervised designee(s) that perform the  
15 described tasks shall be adequately trained in the required identification, evaluation, mitigation, and  
16 mapping skills.

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35 (b) The standard width of the WLPZ and/or the associated basic protection measures shall be determined  
36 from Table I (14 CCR 916.5), [936.5, 956.5] or Section 916.4(c) [956.4(c), 956.4(c)], and shall be stated in  
37 the THP, NTMP, or SYP. A combination of the rules, the THP, NTMP, or SYP, and mitigation measures  
38 shall provide protection for the following:

- 39 a. Water temperature control.
- 40 b. Streambed and flow modification by large woody debris.
- 41 c. Filtration of organic and inorganic material.
- 42 d. Upslope stability.
- 43 e. Bank and channel stabilization.

1 f. Spawning and rearing habitat for salmonids

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3 g. Vegetation structure diversity for fish and wildlife habitat, possibly including but not limited to:

- |                                    |                              |
|------------------------------------|------------------------------|
| 4 1. Vertical diversity            | 5. Microclimate modification |
| 5 2. Migration corridor            | 6. Snags                     |
| 6 3. Nesting, roosting, and escape | 7. Surface cover             |
| 7 4. Food abundance                |                              |

8 (1) Measures and the appropriate zone widths for the protection of the State's waters which have been  
9 taken from Table I (14 CCR 916.5), [936.5, 956.5] or developed under Section 916.4(c) [936.4(c), 956.4(c)]  
10 shall be stated in the THP.

11 (2) All timber operations shall conform to the marking, flagging and other identification of protective  
12 measures specified in CCR 916.4 [936.4, 956.4] and 916.5 [936.5, 956.5] and the THP. Conformance shall  
13 be determined based on the evaluation of no less than a 200 foot lineal segment of each watercourse or lake.

14 (3) The width of the WLPZ shall be measured along the surface of the ground from the watercourse or  
15 lake transition line or in the absence of riparian vegetation from the top edge of the watercourse bank.

16 (4) Slopes shall be measured in percent for the proposed WLPZ. If topography within the proposed  
17 WLPZ is variable, segments of the proposed WLPZ should be segregated by slope class as indicated in  
18 Table I 14 CCR 916.5 [936.5, 956.5].

19 (5) If requested by either party, and after on-the-ground inspection, the RPF and the Director may increase  
20 or decrease the width of a proposed WLPZ. A decrease shall not exceed 25 percent of the width as  
21 determined by the procedure prescribed in Sections 14 CCR 916.4(c) [936.4(c), 956.4(c)], and 916.5 [936.5,  
22 956.5]. Such changes in zone width shall be based on considerations of soil, slope, climatic factors,  
23 biologic, hydrologic, and geologic values listed in Section 14 CCR 916.4(b) [936.4(b), 956.4(b)],  
24 silvicultural methods, yarding systems, road location, and site preparation activities. In no case shall the  
25 width be adjusted to less than 50 feet for Class I and II waters. Where soil surfaced roads exist within the  
26 standard WLPZ, no in-lieu reduction of WLPZ width shall be approved.

27 (6) Within the WLPZ, at least 75% surface cover and undisturbed area shall be retained to act as a filter  
28 strip for raindrop energy dissipation, and for wildlife habitat. This percentage may be adjusted to meet site  
29 specific conditions when proposed by the RPF and approved by the Director or where broadcast burning is  
30 conducted under the terms of a project type burning permit and in compliance with 14 CCR 915.2(b)  
31 [935.2(b), 955.2(b)].

32 (c) The protection and WLPZ widths for Class III and Class IV waters shall prevent the degradation of  
33 the downstream beneficial use of water and shall be determined on a site-specific basis.

34 (1) Where operations occur adjacent to Class III watercourses, the RPF shall designate in the THP an  
35 equipment limitation zone (ELZ) of at least 25 feet where sideslope steepness is less than 30% and at least  
36 50 feet where sideslope steepness is 30% or greater unless explained and justified otherwise in the THP and  
37 approved by the director. Class III watercourses within logging areas where the EHR is Low and the slopes  
38 are less than 30% shall not require an ELZ unless proposed by the RPF or required by the Director. The  
39 RPF shall describe the limitations on the use of heavy equipment in the THP. Where appropriate to protect  
40 the beneficial uses of water the RPF shall describe additional protection measures which may include  
41 surface cover retention, vegetation protection and timber falling limitations. The location of the areas of  
42 heavy equipment use in any ELZ shall be clearly described in the plan, or flagged or marked on the ground  
43 before the preharvest inspection. When necessary to protect the beneficial use of water, the RPF shall  
44 designate and the Director may require a WLPZ for Class III and Class IV waters or an ELZ for Class IV  
45 waters.

46 (2) The width of the WLPZ for Class III and IV waters shall be determined from on-site inspection.  
47 Minimum protective measures required when Class III and Class IV protection zones are necessary are  
48 contained in Table I 14 CCR 916.5 [936.5, 956.5].

49 (3) Soil deposited during timber operations in a Class III water course other than at a temporary crossing  
50 shall be removed and debris deposited during timber operations shall be removed or stabilized before the

1 conclusion of timber operations, or before October 15. Temporary crossings shall be removed before the  
2 winter period, or as approved by the Director.

3 (4) When approved by the Director on an individual plan basis as provided in Section 14 CCR 916.4(c)(1)  
4 [936.4(c)(1), 956.4(c)(1)] Class IV waters shall be exempted from required protection when such protection  
5 is inconsistent with the management objectives of the owner of the manmade watercourse.

6 (d) Heavy equipment shall not be used in timber falling, yarding, or site preparation within the WLPZ  
7 unless such use is explained and justified in the THP and approved by the Director.

8 (e) Flagging for heavy equipment use within the WLPZ adjacent to Class I waters and for all tractor road  
9 watercourse crossings of all watercourses must be completed before the preharvest inspection if one is  
10 conducted or start of operations, whichever comes first. Flagging for heavy equipment use within the  
11 WLPZ adjacent to Class II, III and IV waters may be done at the option of the RPF or as required by the  
12 Director on a site-specific basis.

13  
14 (f) Subsection (d) does not apply to (1)-(4) below. Subsection (e) does not apply to (2)-(4) below.

15 (1) At prepared tractor road crossings as described in 914.8(b) [934.6(b), 954.8(b)].

16 (2) Crossings of Class III watercourses which are dry at the time of timber operations.

17 (3) At existing road crossings.

18 (4) At new tractor and road crossings approved as part of the Fish and Game Code Process (F&GC  
19 1600 et seq.).

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21 Note: Authority cited: Sections 4551, 4553, 4562.7 and 21000(g), Public Resources Code. Reference:  
22 Sections 4512, 4513, 4551.5 and 21001(f), Public Resources Code; Sections 1600 and 5650(c), Fish and  
23 Game Code; Sections 100, 13000 and 13050(f), Water Code, and 33 USC Section 1288(b)(2)(F).

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